

Asphalt Concrete Plants

In Washington, there are approximately 149 facilities that fall under SIC code 2951 Asphalt Paving Mixtures and Blocks (Ecology, 1/20/98).

Description of Process

The asphalt drum mix process involves the grading and storing of various rocks and sands for mixing and conveying to a rotary kiln for heating and additional mixing. As the heated product leaves the kiln, it is combined with refined petroleum to form the finished product. This material is then conveyed to large overhead hopper bins for storage prior to being loaded into delivery trucks.

Method of Determining Emissions

The most common toxic emissions from asphalt concrete plants are from acetaldehyde, acetone, benzene, ethyl benzene, formaldehyde, toluene, and xylene (*AP-42*¹, Section 11.1).

The most common emission control system at these asphalt plants is a baghouse and a wet scrubber. Exhaust gases from the process are manifolded through a wet scrubber to remove the particulates before being vented to the atmosphere from a circular or rectangular exhaust stack.

If plant-specific source tests are not available, *AP-42* contains emission factors for organics and metals, as well as criteria pollutants.

¹ U.S. Environmental Protection Agency, *Compilation of Air Pollutant Emissions Factors Volume 1: Stationary Point and Area Sources*, Fifth Edition with Supplements, October 1997, Document No. AP-42.

References

Eureka Laboratories, *Compilation of Air Toxics Pollutant Emission Factors Volume II B: Technical Support Information Asphalt Concrete Plants*, 1991 Edition, January 1991. Prepared for Central Valley Rock, Sand & Gravel Association.

National Asphalt Pavement Association, *Evaluation of Stack Emissions from HAM Facility Operations*, December 1993, Special Report 166. NAPA Building; 5100 Forbes Boulevard; Lanham, Maryland 20706-4413;

U.S. Environmental Protection Agency, *Compilation of Air Pollutant Emissions Factors Volume I: Stationary Point and Area Sources*, Fifth Edition with Supplements, January 1995, Document No. AP-42. (Section 11.1 Hot Mix Asphalt Plants, January 1995) (available by section on Internet at <http://www.epa.gov/ttn/chief/ap42.html>)

Washington State Department of Ecology, *Facility/Site on the Web*, accessed 1/20/98. (<http://www.wa.gov/ecology/iss/fsweb/fshome.html>)